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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/506,573

09/03/2004

Keisuke Suzuki

023312-0115

1362

22428 7590 01/05/2007

FOLEY AND LARDNER LLP
SUITE 500
3000 K STREET NW
WASHINGTON, DC 20007

EXAMINER

SAUCIER, SANDRA E

ART UNIT

PAPER NUMBER

1651

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

01/05/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No. 10/506,573	Applicant(s) SUZUKI ET AL.	
	Examiner Sandra Saucier	Art Unit 1651	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>9/3/04</u> . | 6) <input type="checkbox"/> Other: ____ |

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DETAILED ACTION

Claims 1-8 are pending and are considered on the merits.

Information Disclosure Statement

No references were found associated with the Information Disclosure Statement of 9/3/04. As a courtesy, the examiner has obtained copies of the three cited references and has sent them for scanning into the file.

Claim Rejections – 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action: A person shall be entitled to a patent unless (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent, (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-6 and 8 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Guanti *et al.* [A2].

The claims are directed to a process for making an optically active allene of formula (1) comprising reacting the allene of formula (2) with an enzyme and water.

The reference is relied upon as explained below.

Guanti *et al.* disclose the conversion of a substrate of formula (2) [46] with PPL to an optically active allene of formula (1), page 1546.

Claim Rejections – 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action: (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation

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under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Guanti *et al.* [A2].

The claim is directed to the process described above where R2 or R3 are different and are selected from the group consisting of H, C 1-4 alkyl or C 6-8 aryl.

Guanti *et al.* disclose the substrate of formula 2 where R2 is H and R3 is C5 alkyl.

The substitution of R3 C5 alkyl for a C1-4 alkyl or C6-8 aryl would have been obvious because this substitution is far from the site of catalysis and in the absence of evidence to the contrary, the substitution of alkyl or aryl groups of different lengths on the same substrate (homologs) would have been obvious in view of their structural similarity.

Claims 1-3, 5-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Guanti *et al.* [A2] in view of Langrand *et al.* [U].

The claims are directed, in the alternative, to an acylation scheme for the resolution of the compound of formula 2.

Guanti *et al.* teach the resolution of the compound of formula 2 by enantioselective hydrolysis of the racemic ester.

Langrand *et al.* teach the resolution of racemic alcohols may be by enantioselective hydrolysis of the racemic ester or enantioselective acylation of the racemic alcohol.

The substitution of the resolution scheme of hydrolysis as taught by

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Guanti *et al.* for the resolution scheme of acylation as taught by Langrand *et al.* would have been obvious because Langrand *et al.* teach that racemic alcohols may be resolved by either hydrolysis or acylation using the same enzyme as the reactions catalyzed by lipases are reversible.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Guanti *et al.* [A2] and Langrand *et al.* [U] as applied to claims 1-3, 5-8 above, and further in view of Wang *et al.* [V].

The claims are further directed to the use of a vinyl ester as the acylation reagent.

Wang *et al.* teach the reversibility of reactions catalyzed by hydrolytic enzymes and that use of a vinyl ester promotes completion of the reaction due to the irreversible nature of the acylation reaction due to the special characteristics of the vinyl ester acylation reaction (page 7201).

One of ordinary skill in the art would have been motivated at the time of invention to make this substitution of enantioselective schemes and choice of an irreversible acylation reagent in order to obtain the resulting compound as suggested by the references with a reasonable expectation of success. The claimed subject matter fails to patentably distinguish over the state of the art as represented by the cited references. Therefore, the claims are properly rejected under 35 U.S.C. § 103.

Allowable Subject Matter

Claims limited to use of lipase isolated from *Candida antarctica* or *Pseudomonas fluorescens* or *Pseudomonas cepacia* or porcine pancreas might be allowable upon presentation. Please note italization and capitalization pattern for microbes.

Conclusion

Applicant should specifically point out the support for any amendments made to the disclosure, including the claims (MPEP 714.02 and 2163.06). Due

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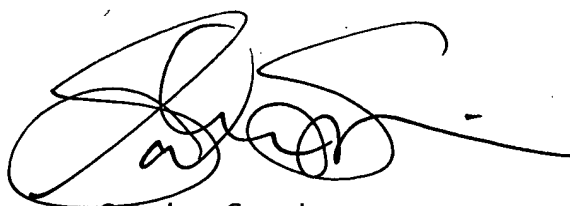
to the procedure outlined in MPEP 2163.06 for interpreting claims, it is noted that other art may be applicable under 35 USC 102 or 35 USC 103(a) once the aforementioned issue(s) is/are addressed.

Applicant is requested to provide a list of all copending applications that set forth similar subject matter to the present claims. A copy of such copending claims is requested in response to the office action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sandra Saucier whose telephone number is (571) 272-0922. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, M. Wityshyn can be reached on (571) 272-0926. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'Sandra Saucier', with a long horizontal line extending to the right.

Sandra Saucier
Primary Examiner
Art Unit 1651

December 27, 2006